Key Petroleum (Australia) Pty Ltd

TriangleEnergy

a Triangle Energy Group Company

PRODUCTION LICENCE 7 (L7)
WELL PAD DECOMMISSIONING

ENVIRONMENTAL BRIDGING DOCUMENT SUMMARY

Document number	Revision	Date of revision
L7/EPBDS-MHWP-KPA	**1**	**02/09/2024**

Approval details

Approvals	Name	Signature	Date
Originator	Alex Bayss **Consultant**		31/08/2024
Reviewer	Louise Smith **Senior Environmental & Regulatory Affairs Advisor**		31/08/2024
Approver	Bryce Donaldson **HSE Manager**		31/08/2024
Approver	Douglas Gillies **Subsurface Manager**		02/09/2024

Copy No	Position	Date
01	HSE Manager	02/09/2024
02	Site Specific Manager	
03	DEMIRS	

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APPENDICES

ACRONYMS

ADWR	Allanooka-Dongara Water Reserve
AER	Annual Environment Report
ALARP	As Low As Reasonably Practical
APPEA	Australian Petroleum Production and Exploration Association
BD	Bridging Document
CAWS	Country Areas Water Supply Act 1947
DAA	Department of Aboriginal Affairs
DBCA	Department of Biodiversity, Conservation and Attractions
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety
DRF	Declared Rare Flora
DWER	Department of Water and Environment Regulation
EP	Environment Plan
EPA	Environmental Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ESA	Environmentally Sensitive Area
ERA	Environmental Risk Assessment
ERP	Emergency Response Plan
HAZID	Hazard Identification
HSE	Health, Safety and Environment
JHA	Job Hazard Analysis
Key	Key Petroleum (Australia) Pty Ltd
L7	Production Licence L7
MHOF	Mount Horner Oil Field
MSDS	Material Safety Data Sheets
NGERA	National Greenhouse and Energy Reporting Act 2007
OSCP	Oil Spill Contingency Plan
PDWSA	Public Drinking Water Source Area
PFW	Produced Formation Water
PIC	Person in Charge
POSMC	Performance Objectives. Standards and Measurement Criteria
WMP	Well Management Plan

Record of Revision It is certified that the amendments listed below have been incorporated in this copy of the publication		
REV	**SECTION**	**DESCRIPTION OF CHANGES**
0	N/A	Creation of Document
1	N/A	Review & Approval

1. EXECUTIVE SUMMARY

Triangle Energy (Global) Limited ("TEG" or "the Company") proposes to conduct well pad decommissioning activities ("Activity") as outlined in this Environmental Bridging Document ("BD") within Production Licence L7 ("L7"). Key operates L7 and the Mount Horner Oil Field ("MHOF"), located within L7.

The well sites associated with this activity are:

- Arranoo -1;
- Mount Horner-4;
- Mount Horner-6;
- Mount Horner-8;
- Mount Horner-9;
- Mount Horner-11;
- Mount Horner-12; and
- Mount Horner-14.

The activities covered by this BD include:

- Agricultural/geotechnical sampling;
- Removal of trees on and around the well pads;
- Removal of hardstand gravel and compacted material on the well pads;
- Contouring pads to mean ground height;
- Recycle inert material by the landowner or disposal at an approved facility; and
- Validation sampling post-removal to confirm the sites are within acceptable screening levels for their intended land use.

This BD interfaces with the previously approved Care and Maintenance Environment Plan ("EP") (Document number: L7/EPCM220415-KPA, Revision 7) for MHOF.

The Operator is Triangle Energy (Global) Limited ("TEG"). Their corporate office is located at Ground Floor, 100 Havelock St, West Perth, 6005, Western Australia. Tel: +61 8 9219 7111. Email: info@triangleenergy.com.au.

2. IMPLEMENTATION STRATEGY

Environmental management is an integral part of the TEG CM activities to ensure that the environmental impacts and risks are reduced, and environmental management is undertaken.

The implementation strategy outlined in the accepted EP (Section 9 of EP) is applicable to the proposed activity. The aspects include:

- Systems, practices and procedures;
- Roles and responsibilities of personnel;
- Training and competencies;
- Monitoring, auditing, management of non-conformance and review;
- Emergency response (including oil spill contingency plan);
- Record keeping; and
- Reporting.

The program will be managed in accordance with the commitments outlined in the Care and Maintenance Environment Plan (Document number: L7/EPCM220415-KPA, Revision 7) for MHOF. For the proposed activity; there are no additional risks or impacts above or beyond the accepted EP.

3. LOCATION AND TENURE

Mount Horner Oil Field (MHOF) is located within the Production Licence L7 (Northern Perth Basin) approximately 350 km north of Perth and 20 km north east of Dongara (Figure 1). The Mount Horner Production Facility ("MHPF") was originally constructed in 1982 and rebuilt in 2000 (after a fire). MHPF tank farm and process infrastructure was decommissioned in 2022.

The MHOF is located on third party land, which is freehold and used for farming. The land is predominantly used for growing cereal crops and grazing cattle / sheep. The areas surrounding Mt Horner consist of agricultural farms.

Access to the MHOF is via Tabletop Road (gravel) from the Midlands Road. A railway crossing (without barriers and signals) occurs close to the junction of Tabletop Road and Midlands Road.

MHOF was placed under care and maintenance in 2011.

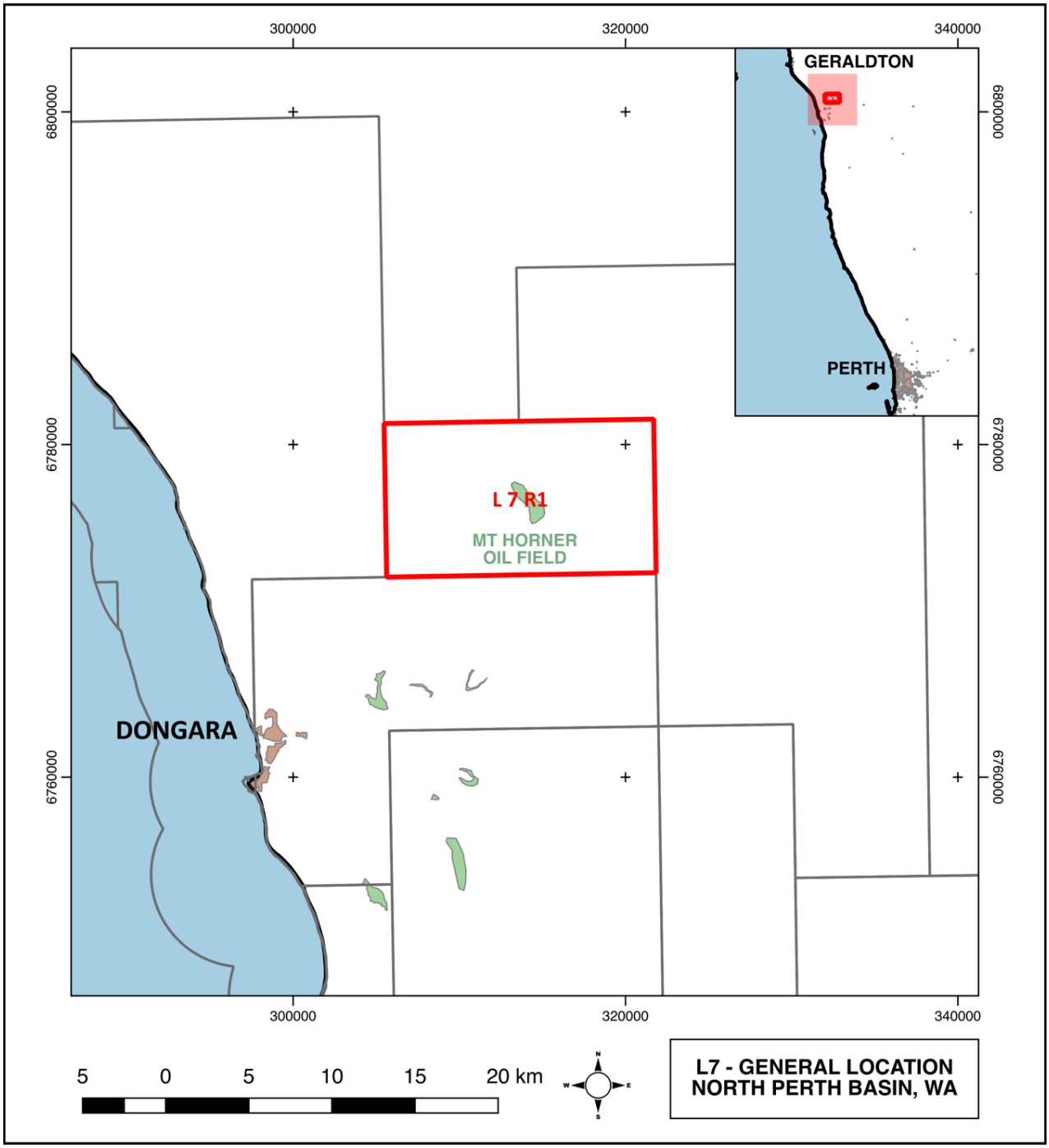

Figure 1: Location of L7 and Mount Horner Oil Field, Perth Basin, WA.

4. DESCRIPTION OF THE ACTIVITY

4.1 OVERVIEW

The activities covered by this BD pertain to the well pads of each well listed in **Table 1**.

The A1, MH4, MH6, MH8, MH9, MH11, MH12 and MH14 wellsites were established between 1980 and 1993, and have all since been plugged and abandoned ("P&A"). A1, MH6 and MH11 were not used for production. Whilst in C&M, the main site activities have included routine inspections and weed control.

Activities include:

- Agricultural/geotechnical sampling;
- Removal of trees on and around the well pads;
- Removal of hardstand gravel and compacted material on the well pads;
- Contouring pads to mean ground height;
- Recycle inert material by the landowner or disposal at an approved facility; and
- Validation sampling post-removal to confirm the sites are within acceptable screening levels for their intended land use.

Well Name	Easting (m)	Northing (m)
Arranoo-1	313,117	6,775,121
Mount Horner-4	314,319	6,776,210
Mount Horner-6	314,358	6,775,501
Mount Horner-8	314,488	6,775,847
Mount Horner-9	314,613	6,776,458
Mount Horner-11	316,189	6,774,367
Mount Horner-12	313,679	6,777,020
Mount Horner-14	314,042	6,776,911
Coordinate System: GDA94, Map Grid of Australia 1994, Zone 50		

Table 1. Location of wells affected by BD

The location of these wells is shown in Figure 2.

Safety Data Sheets ("SDS") for all consumables that are proposed to be used under this BD are included in **Appendix A**.

The proposed decommissioning activities are scheduled to occur between November 2024 and March 2025, after harvest has concluded and subject to regulatory approvals. The activities will be undertaken by up to two (2) personnel and are estimated to take a total of thirty (30) days to complete. All work will be undertaken in daylight hours only.

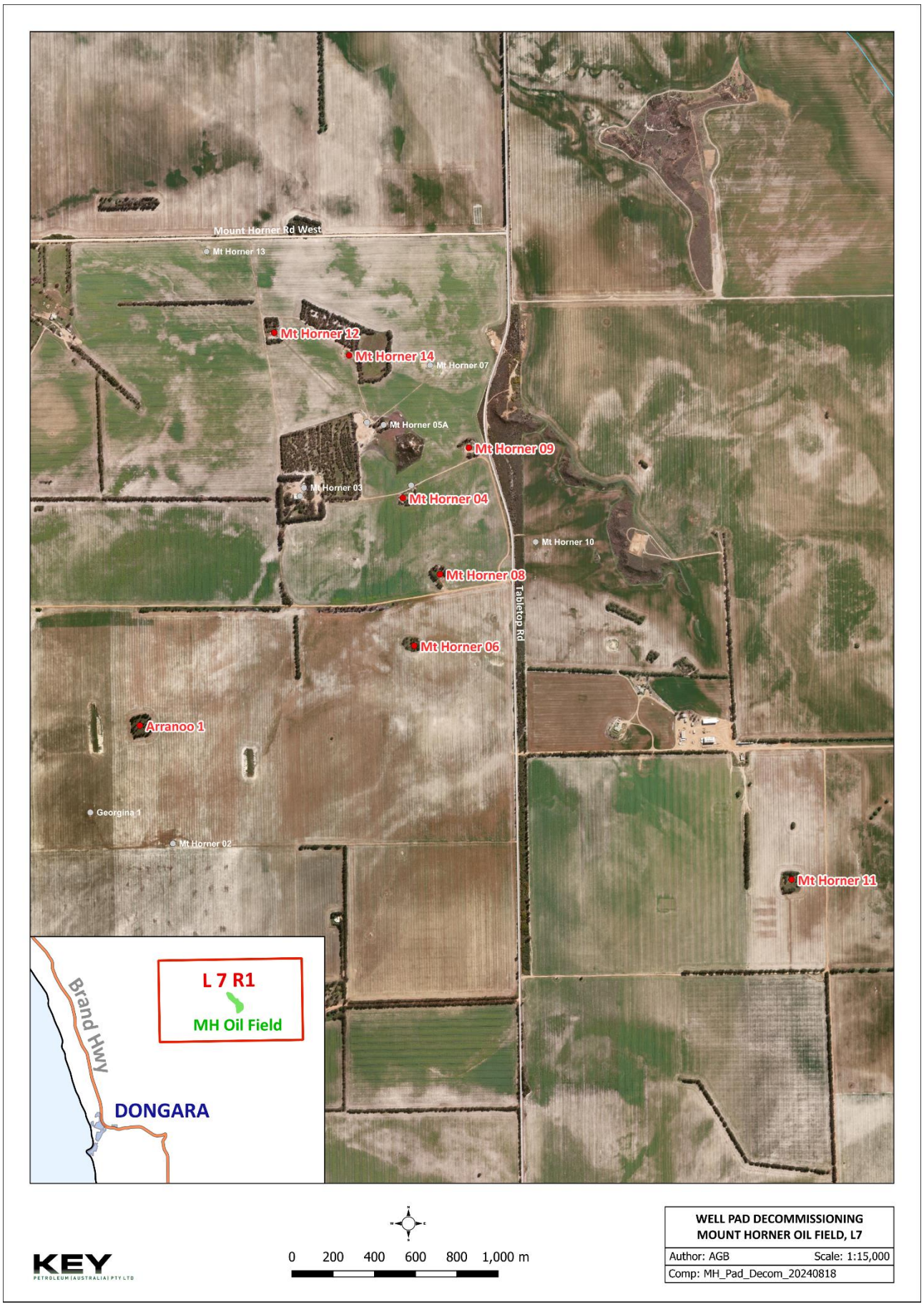

Figure 2. Location of wells affected by BD

4.2 Current Site Status

All infrastructure was either removed, or drained and depressurised from each of the wellsites as follows:

- All wellheads, associated pipework and pumpjacks were previously drained, depressurised and subsequently removed; and,
- A review of historical aerial photography for the area between 1998 and 2024 (Landgate, 2024) shows no clear evidence of drilling mud retention ponds or flare pits remaining at each wellsite.

4.3 AGRICULTURAL/GEOTECHNICAL SAMPLING

The GEMEC 2024 soil assessment of the well pads considered the human, agricultural and contaminant exposure risks were, on average, within the accepted screening levels for blending all well pads materials into the surrounding agricultural soils. However, the assessment did not consider the appropriateness of the soil structure and composition for agricultural or roadbase purposes.

A separate agricultural or geotechnical focussed sampling and analysis is proposed to determine the appropriateness of the assessed soils for cropping and pasture use, or for re-use as gravel roadbase material. The agricultural or geotechnical analyses will also determine whether amendment of the soil is required for these purposes. This sampling and assessment will be conducted prior to commencement of civil works activities at each well pad.

4.4 REMOVAL OF TREES

Woody vegetation on and around each well pad will be removed. A total of 2.29 ha of woody vegetation has been identified for removal and are highlighted with green polygons in the detailed pad overviews in **Appendix B**. Trees will be pushed over and all woody vegetative material and foliage will be removed from site.

4.5 HARDSTAND GRAVEL AND COMPACTED MATERIAL

The well pads shall be removed by scalping/ripping the hardstand gravel and compacted material to approximately 300 mm below ground level. Estimated volumes of gravel hardstand layers at each wellsite were based on the inferred lateral extents and average depth of gravel layer within the soil boreholes, as follows:

Well	Gravel hardstand volume (m^3)	Gravel hardstand area (m^2)	Gravel layer thickness (m)
Arranoo-1	100	1000	0.1-0.3
Mount Horner-4	600	2750	0.1-0.7
Mount Horner-6	50	750	0.1-0.4
Mount Horner-8	350	2500	0.1-0.3
Mount Horner-9	100	1250	0.1-0.4
Mount Horner-11	350	1750	0.1-0.5
Mount Horner-12	350	1750	0.1-0.35
Mount Horner-14	200	1250	0.1-0.3

Table 2. Estimated hardstand volumes

4.6 CONTOURING PADS TO MEAN GROUND HEIGHT

Rock raking and contouring will be conducted to shape the areas to mean ground height for their respective locations.

4.7 INERT MATERIAL HANDLING

All excavated materials will be offered to the landowner for use in the first instance. The balance of materials will be disposed of at an approved facility.

4.8 VALIDATION SAMPLING

Validation sampling will be conducted post-removal to confirm the sites are within acceptable screening levels for their intended land use. Sampling will be at the same locations previously assessed by GEMEC.

Rehabilitation monitoring will be performed in accordance with the EP.

5. COMPLETION CRITERIA

The site rehabilitation will continue until all completion criteria are achieved. On private lease, such as where MHOF is located, completion criteria includes:

- Decommissioning and rehabilitation activities meet stakeholder and legislative expectations;
- Decommissioning and rehabilitation activities are conducted based on industry best practice;
- All MHOF related equipment and waste on site shall be removed after opportunities for transfer of ownership is given to the landowner;
- Removal of all planted trees around well pads, where permitted.
- No dieback is introduced to the area as a result of activities;
- No declared or environmental weeds are introduced to the area as a result of the activities;
- The lands are completely cleared by scalping/ripping the hardstand gravel and compacted material to approximately 300 mm below ground level;
- Contouring will be conducted to shape the areas to mean ground height for their respective locations;
- The area will be rock raked;
- Adverse environmental impacts are minimised and lands are within the acceptable screening levels of hydrocarbons, metals or other chemicals for the intended final land use; and
- The final landform is stable (no erosion greater and 3m long and 300 mm deep, and no soil compaction) and acceptable for use by the landowner for their land use (cropping).

6. DESCRIPTION OF THE ENVIRONMENT

The full assessment of the existing environment in the broader project area and surrounds, including the physical environment, biological environment, heritage and conservation environment and socioeconomic environment through the use of historical data and desktop research is contained within the EP.

The MHOF location is within existing cleared land where there are no identified Cultural Heritage sites. There are no European Heritage sites, threatened flora or fauna or any direct impact on an ESA or EPP Lake within the MHOF location.

The MHOF is situated on gently sloping land 20 km north east of Dongara. The surrounding land use is predominantly used for sheep pasture. The nearest dwelling is a farmhouse 1.5 km to the northwest of the MHOF.

A general summary of the description of the environment contained within the EP is located in this section.

6.1 CLIMATE

The MHOF is located in L7 in the Perth Basin, situated approximately 350km north of Perth. The region has a Mediterranean-type climate characterised by seasonal patterns of hot, dry summers and mild, wet winters. The area is subject to high wind speeds, dust storms, lightning storms, high summer temperatures and low winter night temperatures. The nearest Bureau of Meteorology stations are at Geraldton and Mingenew.

Summer maximum temperatures are warm/hot with 9 or 10 days per month in January and February exceeding 35°C and about 3 days in each of these months exceeding 40°C. Winter maximum temperatures are generally mild and average about 20°C. Minimum temperatures range from an average of about 19°C in February to 9°C in August.

Annual rainfall averages approximately 465 mm near the coast but tapers off to around 335 mm 100 km inland. Generally, 55% of annual rainfall occurs between April and September with the wetter months being June and July. Monthly rainfall ranges from 5 to 10 mm in December - January and 85 to 110 mm in June. During the summer months rain occurs rarely resulting in seasonal droughts, lasting approximately four months. Summer months may record scattered and irregular thunderstorm rain or the infrequent influence of a decaying tropical cyclone. Thunderstorm days total about 10-15 per annum.

The wind speeds average about 15-20 km/h at 9am and 3pm in the cooler months although in the October-March period average wind speeds increase from about 20 km/h at 9am to 25-30 km/h at 3pm as a result of the sea breeze. On and close to the coast the sea breeze is even stronger.

L7 lies at the southern edge of the cyclone belt and may be expected in the November-April each year.

Seismic activity in the area is considered very low as per AS1170 (Part 4). Tremors are occasionally felt in the area, but there has been no large seismic activity. There are no active faults in the area.

The area is occasionally affected by lightning strikes. These generally occur in the summer months.

A prohibited burning period (generally between October-April inclusive) occurs every summer season. Either side of this prohibited burning period is a prescribed burning period when permits are obtained from FESA on advice by the Irwin Shire Council.

6.1.1 Landform and Soils

Generally, soils within the Perth Basin are light and sandy and well drained. Beard (1976) described the soils as “calcareous sand soils of minimal development”. The soils consist of calcareous and siliceous sand underlain by aeolianite, which is often exposed. Two broad soil-landscape systems are present in L7: the Tamala system (yellow, red and black sands on limestone) and the Irwin system (alluvial valley systems). The Tamala system is developed upon a series of low shore parallel dunes/hills located immediately inland of the Quindalup system. Soils comprise well-drained calcareous black sands, neutral reddish-brown sands and neutral yellow sands. The Irwin system occurs on level to gently inclined alluvial flats and terraces of the Irwin and Lockier Rivers. Soils comprise imperfectly drained alkaline grey clays and loamy gradational and duplex soils.

6.2 SURFACE AND GROUNDWATER SYSTEMS

The MHOF is situated in the Allanooka-Dongara Water Reserve ("ADWR"), which was proclaimed under the *Country Areas Water Supply Act 1947* and is classified as a Public Drinking Water Source Area ("PDWSA"). Two priority classifications have been designated to describe the ADWR PDWSA – Priority 1 and Priority 2. MHOF fall within the Priority 2 zone of the ADWR PDWSA (Figure 3).

The groundwater protection area is controlled via legislation that is applied by the Department of Water and Environment Regulation ("DWER"). The Allanooka Scheme is located in the ADWR and supplies water to Geraldton, Dongara, Port Denison, Walkaway, Narngulu, Eradu and Mullewa.

The ADWR lies over the Yarragadee Formation. This formation consists of inter-bedded sandstone, siltstone and shale. The beds are discontinuous and range from 2 to 30 metres in thickness, with an average of about 10 metres. The groundwater may be confined to varying degrees at depth beneath the water table because of the layered nature of the formation (Allen 1980). The depth to the water table in the Yarragadee aquifer system in the Allanooka Scheme ranges between approximately 12 to 85 m below ground level and averages 50 m below ground level.

The current borefield is situated approximately 6.5 kilometres north west of the MHOF. Future plans exist for additional monitoring bores to be installed between 2 to 4 kilometres to the west of MHOF, along Mount Horner Road West and Piggery Lane (Figure 3). The nearest creek is 3 kilometres to the west of the field.

The area in which the MHOF is located is generally devoid of any significant permanent surface water features. The porous and permeable coastal limestone and dune systems tend to allow rainwater to infiltrate to the water table rather than running off the land surface, resulting in a lack of defined major watercourses in the area.

The most significant surface water features in the vicinity of the MHOF are the Irwin and Greenough Rivers. The Irwin River flows in an east-west direction, approximately 160km from Canna to Arurine Bay near Dongara. The Irwin River is approximately 13km south of the MHOF at its closest point (DEC, 2010a). The Greenough River lies approximately 20km north of the MHOF at its closest point. The Greenough River flows approximately 300km south-west from Jingemarra Station to Cape Burney, 9 km south of Geraldton (DEC, 2010a).

The nearest Proclaimed Surface Water Area (as proclaimed under the Rights in Water and Irrigation Act (1914) is the Greenough River and Tributaries Proclaimed Surface Water Area, which is located approximately 25km north of the MHOF (DoW, 2010).

There are several small wetlands present within the Perth Basin. These wetlands are a surface expression of the relatively shallow water table that occurs in the northern parts of the Yarragadee Formation aquifer. The nearest wetland to the MHOF, Allanooka Swamp, is located approximately 9.5 kilometres to the north of the facility.

No direct physical impacts to rivers, creeks, springs, wetlands or soaks will occur as a result of the proposed BD activities.

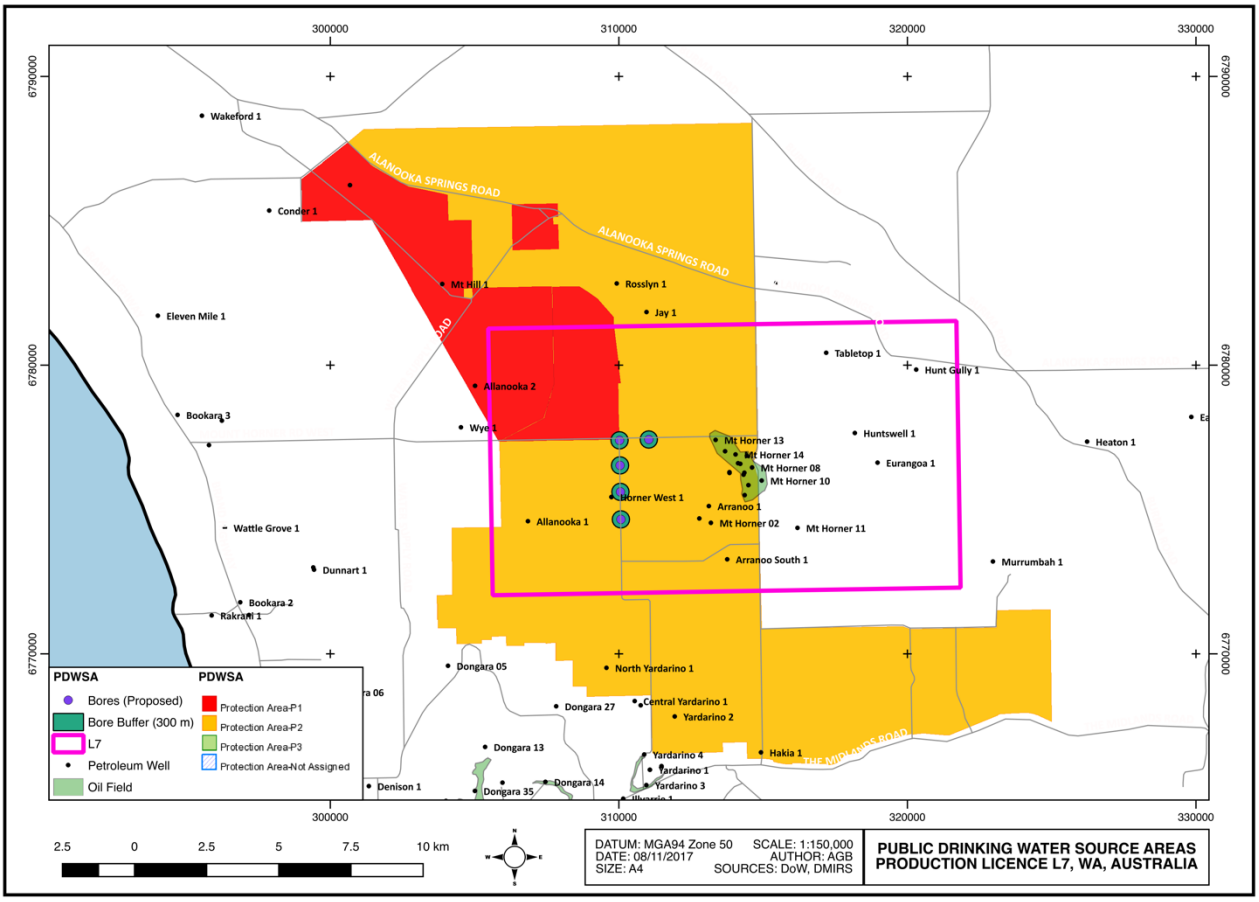

Figure 3. Mount Horner Oil Field within Priority 2 PDWSA

6.3 VEGETATION AND FLORA

6.3.1 Flora

The area occupied by L7 is a primarily private property with patchy remnant vegetation. The cleared areas are pasture or cropland with few native species, over weeds and pasture species. Pasture and trees grow in the vicinity of the Oilfield.

Agricultural Protection Act (1976) Declared Plant Echium plantagineum (Patterson's Curse) occurs within permit area L7. Patterson's Curse has been listed under P1, where the movement of plants, seeds or contaminated machinery is prohibited.

A tree farm of Eucalyptus camaldulensis and Casurina obesa is established at MHOF (intentionally planted for PFW irrigation during operational activities). The tree farm is located in two discrete areas on MHOF and total an area of 17.8 hectares (Appendix C). The trees survive in situ without requiring irrigation with no tree deaths reported to date.

A desktop flora and vegetation assessment, in the form of a literature review and database search, was conducted over the entire permit area L7, encompassing the MHOF. Consistent with EPA Guidance Statement 51 (EPA, 2004a), this level of assessment is considered adequate given that the land is located on freehold land and has been previously cleared.

The MHOF lies within the Irwin Botanical District of the South West Botanical Province (Beard, 1990) and the Lesueur Sandplain subregion of the Geraldton Sandplain bioregion as defined by IBRA (Desmond & Chant, 2001). The vegetation of the Geraldton Sandplain bioregion is broadly described as consisting of mainly proteaceous scrub heaths, rich in endemics, over a sandy, undulating, lateritic sandplain. Extensive York Gum and Jam Acacia woodlands occur on outwash plains associated drainage (Desmond & Chant, 2001).

Seventy-nine Priority Flora species, 42 DRF species, and one other species at risk (as gazetted under the *Wildlife Conservation Act 1950*) have been recorded within the Lesueur Sandplain subregion (Desmond & Chant, 2001).

Searches of the DPAW Threatened Flora Species Database and the Western Australian Herbarium Database (DEC, 2010b; DEC, 2010c) identified two DRF and two Priority Flora species surrounding the MHOF.

6.4 THREATENED AND PRIORITY ECOLOGICAL COMMUNITIES

The MHOF is located on freehold land that has previously been cleared. There will be no clearing of native vegetation required for the BD program or when accessing the site. The BD program is not located within, or likely to impact, an ESA or DRF.

A search of the EPBC Act Protected Matters Database (DEWHA, 2010) identified no nationally threatened animals and plant species within L7.

No other matters of National Environmental Significance were identified within L7 and the BD program is not required to be referred for assessment under the EPBC Act.

6.5 ENVIRONMENTALLY SENSITIVE AREAS

The MHOF is located within the Lesueur Sandplain subregion, which consists mainly of dryland agriculture (69.34%). Conservation in the subregion is concentrated in western areas (Desmond and Chant, 2001), with the most significant conservation areas being south of Dongara.

The closest conservation area, the Burma Road Nature Reserve, is approximately 12km north of MHOF. The Burma Road Nature Reserve is vested with the Western Australian Conservation Commission and is classified as an 'A' class nature reserve for the conservation of flora and fauna.

The MHOF is not located within Commonwealth lands or reserves and will not impact on areas of conservation significance.

6.6 FAUNA

A total of 1 mammal, 11 bird, 3 reptile and 4 invertebrate species classified as Conservation Significant Fauna may occur within the greater area.

A number of the species listed in the table are under pressure from feral animals either directly through predation (e.g. from foxes and cats) or indirectly through habitat destruction or alteration (e.g. by rabbits and goats).

Feral animals that are known to be present within the Lesueur Sandplain subregion include:

- Goats (*Capra hircus*);
- Rabbits (*Oryctolagus cuniculus*);
- Pigs (*Sus scrofa*);
- European Red Foxes (*Vulpes vulpes*);
- Rats (*Rattus rattus*); and
- Cats (*Felis catus*).

The area surrounding MHOF is farming land, and broad-acre cropping and sheep grazing predominate (Desmond & Chant, 2001).

Western Grey Kangaroos, which are widespread within the region, may also occur in the general vicinity of the facility.

6.7 SOCIAL ENVIRONMENT

MHOF is located within a sparsely populated region with limited settlement, transport or communications infrastructure. The region is relatively undeveloped, comprising of small coastal settlements that are economically dependent on fishing, agriculture, tourism, mining and natural gas production. The townships of Dongara and Port Denison to the south west are the largest population centres in the vicinity of MHOF. Dongara/Port Denison is a rock lobster fishing port and the region is the centre for Western Australia's rock lobster industry. There is one private landowner in permit area L7 directly affected by MHOF operation and commercial arrangements are in place. Land use

within the surrounding region is pastoral, consisting of cereal crops and canola, sheep and cattle farming. Nomadic Aboriginal people no longer reside in the area, although some maintain their links to the area.

6.8 CULTURAL ENVIRONMENT

Field and desktop ethnographic surveys have been carried out by the previous Operator to determine if operations are likely to impact upon areas of cultural heritage significance.

The MHOF does not operate near and will not impact on any registered sites.

6.9 ECONOMIC ENVIRONMENT

The significant economic activities in the region include oil, gas and mineral exploration and production, and broad hectare cropping and grazing activities. Other activities in the area include aquaculture and olive growth and production. Early settlement in the Dongara region was by pastoralists, however mining and agriculture are now important components of the regional economy.

6.10 AIR QUALITY AND NOISE

Air quality and noise emissions within L7 and surrounds are expected to be slightly above natural ambient levels due to pastoral and industrial activities.

The overall impact during the BD program is expected to be low given the distance to the nearest sensitive receptor, the use of noise suppressed machinery and the timing of works occurring between 6am and 6pm. It is expected that these activities will not impact on nearby receptors. Noise monitoring will be conducted should a noise complaint be received.

6.11 STAKEHOLDER CONSULTATION

A stakeholder consultation program is being implemented. The aim of the consultation program is to inform stakeholders and to identify any concerns, management strategies and positive benefits.

Table 3 provides a summary of the stakeholder consultation that has been undertaken to date that are pertinent to the BD activities.

TEG commits to ongoing consultation during the course of the proposed BD activities as necessary to ensure the pertinent stakeholders are aware of the commencement and cessation of activities and any key changes to the scope or schedule of the BD activities.

Table 3: Stakeholder Consultation Register

Date	Stakeholder	Personnel	Method	Topic Covered	Outcomes
06-Apr-22	Viridis & Stoneaxe Landowners	TEG KPA	Email	Signed copies of Land Access Agreements provided to TEG partners	Final approved agreements received
26-Apr-22	Viridis	TEG	Email	Confirmation from Viridis of new Operations Liaison Officer g at The Grange farm	Contact details shared
25-May-22	Viridis	TEG	Email	Agreement regarding compensation payment to Viridis for seismic survey crop disturbance in the MH06 paddock	Land access granted
05-Aug-22	Viridis	TEG	Email	Notification to Viridis of seismic contractor's fire preparedness protocol	Approved by return Email from Viridis
03-Apr-23	Viridis	TEG	Email & Teams Meeting	Discussion of TEG's provisional plans for drilling in the Mount Horner area in 2024	Viridis agreed to allow access for scouting purposes
9-May-23	Viridis	TEG	Face to Face meeting at	Access for Booth well, rehabilitation of Mt Horner sites, DMIRS sign off for Rehab.	Site visit to inspect rehab work, commitment to follow up on rehab works when DMIRS allow access.

			The Grange.		
8-Sep-23	Viridis Ag	TEG	Meeting on site and drive around	Potential for use of Camp for a future drilling activity	Viewed the existing site and infrastructure, requirements.
2-Oct-2023	Viridis Ag	TEG	Face-to-face meeting on site	Access Agreement renegotiation	Continuing discussion regarding VA access conditions. Soil sampling and civil works discussed.
13-Nov-2023	Viridis Ag	TEG	Phone Call	Update re: VA access requirements	Viridis has arranged for some soil sampling after harvest, through CSBP.
10-Jan-24	Viridis Ag	TEG	Face-to-face meeting on site	Access Agreement renegotiation	Viridis to provide TEG with proposal outlining VA requests for land rehab.
19-Jan-24	Viridis	TEG	Email	Access and Mt Horner	TEG sent email to Viridis outlining offer on Mt Horner rehab.
23-Jan-24	Viridis	TEG	Teams Meeting	Access Agreement and Mt Horner	Discussion on offer made on 19-Jan-24. Viridis stated that they needed to know what was to be undertaken by what month on Mt Horner rehabilitation.
24-Jan-24	Viridis	TEG	Telephone	Access Agreement and Mt Horner	Defined further terms offered in email of the 19-Jan-24.
28-June -24	Viridis	TEG	Telephone	Rehabilitation timing around harvest for on-site civil works	Viridis anticipate finishing harvest by December 2024. TEG suggested that they touch base later in the year and Viridis can liaise directly with the civil works company to arrange times for on-site works.

Appendix A: Safety Data Sheets

SAFETY DATA SHEET

SHELL DIESOLINE 10

Infosafe No.: LQ4CF
ISSUED Date : 22/09/2022
ISSUED by: VIVA ENERGY AUSTRALIA PTY LTD (FORMERLY: SHELL COMPANY OF AUSTRALIA LTD)

Section 1 - Identification

Product Identifier
SHELL DIESOLINE 10

Company Name
VIVA ENERGY AUSTRALIA PTY LTD (FORMERLY: SHELL COMPANY OF AUSTRALIA LTD) (ABN 46 004 610 459)

Address
Level 16, 720 Bourke Street Docklands
VIC 3008 AUSTRALIA

Telephone/Fax Number
Tel: +61 (0)3 8823 4444
Fax: +61 (0)3 8823 4800

Emergency Phone Number
1800 651 818 (Australia) / Poisons Information Centre: 13 11 26 (Australia)

Recommended use of the chemical and restrictions on use
Fuel for on-road diesel-powered engines, in marine diesel engines, boilers, gas turbines and other combustion equipment.
This product is intended for use in closed systems only.

Section 2 - Hazard(s) Identification

GHS classification of the substance/mixture
Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.
Complies with the requirements of Special Provision AU01 and therefore exempted from being classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)
Classified as Dangerous Goods according to International Maritime Dangerous Goods Code (IMDG) and International Air Transport Association (IATA).
Flammable liquids: Category 4
Acute toxicity: Category 4 - Inhalation
Carcinogenicity: Category 2
Aspiration hazard: Category 1
Hazardous to the Aquatic Environment - Long-Term Hazard: Category 2

Signal Word (s)
DANGER

Hazard Statement (s)
AUH066 Repeated exposure may cause skin dryness or cracking.
H227 Combustible liquid.
H332 Harmful if inhaled.
H351 Suspected of causing cancer.
H304 May be fatal if swallowed and enters airways.
H411 Toxic to aquatic life with long lasting effects.

Pictogram (s)
Exclamation mark,Health hazard,Environment

Precautionary Statement – Prevention
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statement – Response
P312 Call a POISON CENTER/doctor if you feel unwell.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor
P331 Do NOT induce vomiting.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P370+P378 In case of fire: Use foam, water spray or fog to extinguish.
P391 Collect spillage.

Precautionary Statement – Storage
P403 Store in a well-ventilated place.
P405 Store locked up.

Precautionary Statement – Disposal
P501 Dispose of contents/container to an approved waste disposal plant.

Section 3 - Composition and Information on Ingredients

Ingredients

Name	CAS	Proportion
Fuels, diesel	68334- 30- 5	95- 100 %
Fatty acids, vegetable oil, methyl esters	68990- 52- 3	0- 5 %

Preparation Description
Complex mixture of hydrocarbons consisting of paraffins, cycloparaffins, aromatic and olefinic hydrocarbons with carbon numbers predominantly in the C9 to C25 range. May also contain several additives at <0.1% v/v each. May contain cetane improver (Ethyl Hexyl Nitrate) at <0.2% v/v. May contain catalytically cracked oils in which polycyclic aromatic compounds, mainly 3-ring but some 4- to 6-ring species are present.

Section 4 - First Aid Measures

Inhalation
If inhaled, remove affected person from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.

Ingestion
Do NOT induce vomiting. Wash out mouth and lips with water. Where vomiting occurs naturally have affected person place head below hip level in order to reduce risk of aspiration. Seek immediate medical attention.

Skin
Remove all contaminated clothing immediately. Wash affected area thoroughly with soap and water. Wash contaminated clothing before reuse or discard. Seek medical attention.

Eye
If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and/or persist seek medical attention.

First Aid Facilities
Eyewash and normal washroom facilities.

Advice to Doctor

Treat symptomatically.

Other Information

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

Section 5 - Firefighting Measures

Suitable Extinguishing Media

Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable Extinguishing Media

Do not use water jet.

Hazards from Combustion Products

Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including carbon monoxide, oxides of sulphur, carbon dioxide and oxides of nitrogen.

Specific hazards arising from the chemical

Combustible. This product will burn if exposed to fire.

Decomposition Temperature

Not available

Precautions in connection with Fire

Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed containers. Fight fire from safe location. This product should be prevented from entering drains and watercourses.

Section 6 - Accidental Release Measures

Emergency Procedures

Wear appropriate personal protective equipment and clothing to prevent exposure. Extinguish or remove all sources of ignition and stop leak if safe to do so. Increase ventilation. Evacuate all unprotected personnel. If possible contain the spill. Place inert absorbent, non-combustible material onto spillage. Use clean non-sparking tools to collect the material and place into suitable labelled containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

Section 7 - Handling and Storage

Precautions for Safe Handling

Avoid inhalation of vapours and mists, and skin or eye contact. Use only in a well ventilated area. Keep containers sealed when not in use. Prevent the build up of mists or vapours in the work atmosphere. Do not use near ignition sources. Do not pressurise, cut, heat or weld containers as they may contain hazardous residues. Maintain high standards of personal hygiene by washing hands prior to eating, drinking, smoking or using toilet facilities.

Avoid exposure. Do not handle until all safety precautions have been read and understood.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area away from sources of ignition, foodstuffs, clothing and incompatible materials such as oxidising agents. Keep containers closed when not in use, securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Have appropriate fire extinguishers available in and near the storage area. Take precautions against static electricity discharges. Use proper grounding procedures. Ensure that storage conditions comply with applicable local and national regulations.

For information on the design of the storeroom, reference should be made to Australian Standard AS1940 - The storage and handling of flammable and combustible liquids.

Storage Regulations

Classified as a Class C1 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS1940 (2017).

Recommended Materials

For containers, or container linings use mild steel or stainless steel. Aluminium may also be used for applications where it does not present an unnecessary fire hazard. Examples of suitable materials are: high density polyethylene (HDPE) and Viton (FKM), which have been specifically tested for compatibility with this product. For container linings, use amine-adduct cured epoxy paint. For seals and gaskets use: graphite, PTFE, Viton A, Viton B.

Unsuitable Materials

Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Examples of materials to avoid are: natural rubber (NR), nitrile rubber (NBR), ethylene propylene rubber (EPDM), polymethyl methacrylate (PMMA), polystyrene, polyvinyl chloride (PVC), polyisobutylene.; However, some may be suitable for glove materials.

Section 8 - Exposure Controls and Personal Protection

Occupational exposure limit values
No exposure standards have been established for the mixture. However, over-exposure to some chemicals may result in enhancement of pre-existing adverse medical conditions and/or allergic reactions and should be kept to the least possible levels.

Biological Monitoring
No biological limits allocated.

Control Banding
Not available

Engineering Controls
This substance is hazardous and should be used with a local exhaust ventilation system, drawing vapours away from workers' breathing zone. A flame-proof exhaust ventilation system is required. If the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure standards, suitable respiratory protection must be worn. Refer to relevant regulations for further information concerning ventilation requirements.
Refer to AS 1940 - The storage and handling of flammable and combustible liquids and AS/NZS 60079.10.1 Explosive atmospheres - Classification of areas - Explosive gas atmospheres, for further information concerning ventilation requirements.

Respiratory Protection
If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements.
Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye and Face Protection
Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations.
Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 (series) - Eye Protectors for Industrial Applications.

Hand Protection
Wear gloves of impervious material such as nitrile gloves (Breakthrough time of > 240 minutes), neoprene, PVC gloves. Final choice of appropriate gloves will vary according to individual circumstances. i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations.
Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Thermal Hazards
No further relevant information available.

Body Protection
Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

Section 9 - Physical and Chemical Properties

Properties	Description	Properties	Description
Form	Liquid	**Appearance**	Colourless to straw liquid.
Colour	Colourless to straw	**Odour**	May contain a reodorant
Melting Point	Not available	**Freezing Point**	Not available
Boiling Point	170 - 390 °C	**Decomposition Temperature**	Not available
Solubility in Water	Not available	**Specific Gravity**	0.82 - 0.85 gm/cm at 15°C
pH	Not available	**Vapour Pressure**	< 1 hPa at 20 °C
Relative Vapour Density (Air=1)	Not available	**Evaporation Rate**	Not available
Odour Threshold	Not available	**Volatile Component**	Not available
Partition Coefficient: n-octanol/water (log value)	3 - 6	**Density**	Typical 0.84 g/cm³ at 15 °C
Flash Point	Typical 63 °C (ASTM D-93 / PMCC)	**Flammability**	Combustible
Auto-Ignition Temperature	> 220 °C	**Flammable Limits - Lower**	1 %(V)

Flammable Limits - Upper	6 %(V)	**Kinematic Viscosity**	2 - 4.5 mm²/s at 40 °C
Particle Characteristics	Not available		

Section 10 - Stability and Reactivity

Reactivity
Reacts with incompatible materials.

Chemical Stability
Stable under normal conditions of storage and handling.

Possibility of hazardous reactions
Not available

Conditions to Avoid
Avoid heat, sparks, open flames and other ignition sources.

Incompatible Materials
Strong oxidising agents.

Hazardous Decomposition Products
Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including carbon monoxide, oxides of sulphur, carbon dioxide and oxides of nitrogen.

Hazardous Polymerization
Not available

Section 11 - Toxicological Information

Toxicology Information
The available toxicity data for material given below.

Acute Toxicity - Oral
LD50:(Rat): >2000 mg/kg

Acute Toxicity - Dermal
LD50:(Rabbit): >2000 mg/kg

Ingestion
May be fatal if swallowed and enters airways. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause severe pulmonary injury that may lead to death. May cause irritation to the mouth, throat, esophagus and stomach with symptoms of nausea, abdominal discomfort, vomiting and diarrhoea.

Inhalation
Harmful if inhaled. Inhalation of product vapours can cause irritation of the nose, throat and respiratory system.

Skin
May be irritating to skin. The symptoms may include redness, itching and swelling. Repeated exposure may cause skin dryness and cracking and may lead to dermatitis.

Eye
May be irritating to eyes. The symptoms may include redness, itching and tearing.

Respiratory Sensitisation
Not expected to be a respiratory sensitiser.

Skin Sensitisation
Not expected to be a skin sensitiser.

Germ Cell Mutagenicity
Not considered to be a mutagenic hazard.

Carcinogenicity
Suspected of causing cancer. Classified as a suspected human carcinogen.

Reproductive Toxicity
Not considered to be toxic to reproduction.

STOT - Single Exposure
Not expected to cause toxicity to a specific target organ.

STOT - Repeated Exposure
Not expected to cause toxicity to a specific target organ.

Aspiration Hazard

May be fatal if swallowed and enters airways.

Other Information
Repeated Dose Toxicity: Kidney: Caused kidney effects in male rats which are not considered relevant to humans.

Section 12 - Ecological Information

Ecotoxicity
Toxic to aquatic life with long lasting effects.

Persistence and degradability
Major constituents are expected to be inherently biodegradable. The volatile constituents will oxidize rapidly by photochemical reactions in air.

Mobility
Floats on water. Partly evaporates from water or soil surfaces, but a significant proportion will remain after one day. Large volumes may penetrate soil and could contaminate groundwater. Contains volatile constituents.

Bioaccumulative Potential
Contains constituents with the potential to bioaccumulate.

Other Adverse Effects
Films formed on water may affect oxygen transfer and damage organisms.

Environmental Protection
Do not discharge this material into waterways, drains and sewers.

Acute Toxicity - Other Organisms
LL/EL/IL50:(Aquatic organisms): 1-10 mg/l

Hazardous to the Ozone Layer
This product is not expected to deplete the ozone layer.

Section 13 - Disposal Considerations

Disposal Considerations
Dispose of waste according to applicable local and national regulations. Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes including emptied containers are controlled wastes and should be disposed of in accordance with all applicable local and national regulations.
To minimise personal exposure, refer to Section 8 - Exposure Controls and Personal Protection.

Section 14 - Transport Information

Transport Information
Road and Rail Transport (ADG Code):
Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)
This product meets the requirements of special provision AU01.

Note: Special Provision AU01:
Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in:
packagings that do not incorporate a receptacle exceeding 500 kg(L); or
IBCs

This product is not classified as Dangerous Goods UN number 1202.

Note: Special Provision AU02:
GAS OIL or DIESEL OIL or HEATING OIL, LIGHT or PETROLEUM DISTILLATE is not subject to this Code if it does not meet the criteria of Chapter 2.3 for assignment to Class 3; i.e. if the flash point is more than 60 °C and the substance is not offered for transport at a temperature above its flash point. Such substances will normally be C1 combustible liquids which are not classified as dangerous goods for transport purposes. However, the presence of a C1 combustible liquid in one or more compartments of a tank vehicle or portable tank transporting other refined petroleum products must be considered when determining the application of UN Number 1270 in accordance with 3.2.5.4 and 5.3.1.3.3.

Marine Transport (IMO/IMDG):

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.
Class/Division: 9
UN No: 3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS: FUEL, DIESEL)(MARINE POLLUTANT)
Packing Group: III
EMS : F-A, S-F
Special Provisions: 274, 335, 969

Air Transport (ICAO/IATA):
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.
Class/Division: 9
UN No: 3082
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Contains: Fuel, diesel)
Packing Group: III
Packaging Instructions (passenger & cargo): 964
Packaging Instructions (cargo only): 964
Hazard Label: Miscellaneous
Special Provisions: A97, A158, A197, A215

UN Number
None Allocated

Proper Shipping Name
None Allocated

Transport Hazard Class
None Allocated

Special Precautions for User
Not available

IMDG Marine pollutant
Yes

Transport in Bulk
Not available

Additional Information
This product is classified as Oils under MARPOL Annex I. MARPOL Annex I rules apply for bulk shipments by sea.

Section 15 - Regulatory Information

Regulatory Information
Classified as Hazardous according to the Globally Harmonised System of classification and labelling of chemicals (GHS) including Work, Health and Safety regulations, Australia.
Classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Poisons Schedule
S5

Montreal Protocol
Not listed

Stockholm Convention
Not listed

Rotterdam Convention
Not listed

International Convention for the Prevention of Pollution from Ships (MARPOL)
This product is classified as Oils under MARPOL Annex I. MARPOL Annex I rules apply for bulk shipments by sea.

Agricultural and Veterinary Chemicals Act 1994
Not available

Basel Convention
Not available

Section 16 - Any Other Relevant Information

Date of Preparation
SDS Reviewed: September 2022
Supersedes: June 2021

Version Number
3.0

Literature References
Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.
Standard for the Uniform Scheduling of Medicines and Poisons.
Australian Code for the Transport of Dangerous Goods by Road & Rail.
Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Code of Practice for Supply Diversion into Illicit Drug Manufacture.
National Code of Practice for Chemicals of Security Concern.
Agricultural Compounds and Veterinary Chemicals Act.
International Agency for Research on Cancer (IARC) Monographs.
Montreal Protocol on Substances that Deplete the Ozone Layer.
Stockholm Convention on Persistent Organic Pollutants (POPs).
Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.
International Air Transport Association (IATA) Dangerous Goods Regulations.
International Maritime Dangerous Goods (IMDG) Code.
Workplace exposure standards for airborne contaminants.
Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).
Globally Harmonised System of Classification and Labelling of Chemicals (7th revised edition).
Code of Practice: Managing Noise and Preventing Hearing Loss at Work.

END OF SDS